

Horticulture Northwest

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Volume 7 Number 4
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Sallie D. Allen, Editor

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PROGRESS AT THE CENTER FOR URBAN HORTICULTURE

H.B. Tukey, Jr., Professor and Director

The Center for Urban Horticulture continues to move ahead at a rapid pace. Schematic drawings for the building complex and site plan at Union Bay Circle have been developed by the architects, Jones & Jones, and have been enthusiastically approved by the Building Committee and the Arboretum Advisory Committee. The plans have been approved by the Architectural Commission of the University and will be considered by the Board of Regents on November 21. The main building cluster consists of three connected structures arranged around a central court with spaces for educational meetings, support organizations, library and herbarium, administrative functions, faculty offices, and seven laboratories. The greenhouse and growth chamber facilities will be connected to the main building by a covered walkway passing through three acres of demonstration and display gardens. Extensive plantings are planned for the site, both for research purposes and to demonstrate the use of plant materials. The cost of the complete facility is approximately \$8 million, of which more than half will be raised from private donations.

Search committees for three faculty positions will evaluate candidates in mid-November. The University is renovating parts of the old pharmacy laboratories and greenhouses which should be ready for occupancy by faculty early next spring.

A most exciting development has taken place at the Washington Park Arboretum with the hiring of Jan Pirzio-Biroli as a naturalist and volunteer coordinator to improve educational opportunities at the Arboretum and to coordinate publicity, interpretive programs and tours. Volunteers have agreed to be in the Arboretum office to answer questions and give guidance to those visiting the Arboretum.

At the recent meeting of the Western Region of the American Association of Botanical Gardens and Arboreta, speakers emphasized the need for research into plant-human relationships. In this regard, a research plan is being developed to investigate these subtle relationships by an appropriate research group from the University using the Bloedel Reserve. The unusual collection of expertise at the University and the unique situation at the Bloedel Reserve makes this a most exciting development.

The University of Washington continues its strong commitment by making Urban Horticulture one of its top four priorities for the next biennium budget. In addition, the City of Seattle has increased its support by providing funds for a gardener position in the Japanese Garden.

All of these developments show that the Center for Urban Horticulture is firmly established and is well on its way toward becoming a strong research, teaching and public service unit.



DEVONIAN ALPINE GARDEN

by Dr. P. N. D. Seymour, Director Devonian Botanic Garden
The University of Alberta, Edmonton, Alberta, Canada

Our alpine garden is divided into four main areas; two simulated glaciated ridges which face south and east, a scree with a gentle slope to the west, a boulder field as found in the high Rockies which faces north, and a traditional alpine garden with large rocks, a few up to four tons each, which faces southwest.

The whole alpine garden is built on sand dunes. Originally, the area was saucer-shaped; in other words, a frost pocket. We borrowed a cat and cut through one wall of the saucer, thus letting cold air drain away. The bottom of the saucer is now occupied by lawn.

There is always a great deal of argument over alpine garden soils and composition of screes. One of the points of a good scree is supposed to be perfect drainage. Our scree is on a sand dune -- what better drainage?

There was only a thin layer of vegetation on the original sand dune, so in order to get humus and some moisture retention into the area, we mixed sand with acid peat in a 50/50 proportion. There is no soil in the alpine garden at all; in fact, there is no soil excepting one border in the whole eighty acres.

We occasionally have strong winds on the prairies and these tend to blow the sand away. We covered the entire alpine garden with a layer of quarter-inch rock chips. This stopped the wind erosion and also gave a good mulch, which kept the plants cool and gave a perfect surface for "buns."

When at the meeting in Victoria in the spring, I noted that in the slides there most of the rock gardens had lots of shade. We have lots of strong sun and very little shade. Edmonton is two thousand feet above sea level and has only seventeen inches of rain per annum - not the most kindly climate for alpines. Our spring comes in April.

Rather than just list plants, today, the 25th of April, I walked around and looked at what was in flower or about to flower in our spring, which means somewhat of a squashing of flowering periods.

First, a brief look at the traditional alpine garden which is solely devoted to native alpine and prairie plants of Alberta. The very first to hit my eye was *Besseya cinerea*, with fluffy one and one-half inch purple spikes and greyish leaves; a plant of quiet botanical elegance. This came in under number, and it fooled me completely; I merely looked at it briefly and dismissed it as a willow. *Fritillaria pudica* had increased nicely from last year, and it has twelve fat flower buds. *Sedum rosea*, with brick-red buds enfolded with small green leaves is forming nice clumps. Again, not a very showy plant, but interesting. Beside a large boulder, *Cystopteris fragilis* had unfurled three-inch leaves already. Next along the path I looked at nice, fat buds on *Townsendia parryi* and, to my relief, there were many seedlings round about to carry on the flowering for next year.

One of the joys of bringing plants in mats of tufts from the wild are the small seedlings or pieces that appear where you least expect them. In this way we have *Androsace chamaejasme*, *Anemone parviflora*, various small ranunculus and the alpine myosotis all over this part of the rock garden. This does lead to problems with labeling.

Next, let's walk over and look at the scree. Again, this is divided into two parts -- one for native plants, and the other for introduced. In the native plant area we imported, three years ago, some 6" mats of *Saxifraga oppositifolia*, and these are now in full flower. I was surprised that such big clumps took so easily and have stayed with us. Beside them are some nice 8" clumps of *Silene acaulis*, which likewise have come in from the wild and have done very well. The first purple flowers of *Oxytropis podocarpa* are opening up. This is a nice mat-forming species from the high Rockies. Again, I was pleasantly surprised to find that many legumes such as *Oxytropis*, *Hedysarum*, and *Astragalus* moved easily when lifted from the wild and have survived and flowered for three years. I noted that the foliage of *Sisyrinchium douglasii* was two inches tall. It's been with us two winters now and flowered well last year. I have hopes for this year. Our big clump of *Mesembryanthum othonna* has suffered somewhat, but it is coming away from the base. The small clumps round about are doing well. *Hebe pimeloides* is alive and looking well. Then comes a mess of saxifragas. Of the ones in bloom at this point, *Saxifraga sancta* is perhaps the best, followed by *S. 'Faldonside.'* I also noted *S. verticillata*, *S. paulinae*, *S. 'Elizabeth'*, *S. burseriana nana*, and *S. haagii*. *S. bronchialis austromontana*, which I showed a slide of with good fall colour, is equally attractive in the spring, as the colour has not changed yet. *Iris 'Cantab'* was nestling behind a rock and had increased. The first of the androsaces, *A. carneae brigantacea*, was in full flower.

On the glaciated ridges not so much was in bloom. A couple of weeks ago, our *Crocus chrysanthus* varieties were out, the best of these being 'Ushack Orange,' 'Blue Peter,' and 'Buttercup.' *Synthyris stellata* was showing its powdery blue flowers high on the slope. Beside it was good growth on the foliage of *Lewisia rediviva*. The earliest drabas, *D. hispanica* and *D. aizoon*, were not showy, but they do provide early colour. On one slope *Chionodoxa* spp. in a glorious mixture were fully out, along with a lovely large patch of *Crocus biflorus 'Weldonii albus.'* Then I found a great treat -- three flowers on *Trillium rivale*, which are hard to see against the rock chips. These rock chips, I have to admit, do make it hard to see some of the smaller plants, but they do protect them against being stolen. *Adonis vernalis* is fully out; a magnificent plant. *A. amurensis 'Fuku Jukai'* is out, much quieter, rather reminiscent of a yellow *Paeonia tenuifolia*.

We only started to plant the boulder field last fall and, on a trial basis, we put out several dwarf conifers. These were well covered with snow in the winter and have all come through well. Mrs. Ford's comment was, "I wish I'd planted more." However, we will have to wait and see how these do in succeeding winters. I have the feeling that as long as they have snow cover they are going to survive and do well. These dwarf conifers included *Chamaecyparis pisifera 'Filifera'* and *C. pisifera 'Sungold'*, *C. obtusa coraliformis*, *C. 'Tsukumo'*, *Tsuga 'Cole's Prostrate'*, *T. canadensis hussii*. One that didn't do well was *Juniperus communis compressa*, and it is mainly brown. *Abies balsamea nana* is looking well in several places. One surprise -- I put out *Leucothoe axillaris*

last fall-- and it looks very healthy. In this north-facing area we have healthy plants of *Ramonda 'Wisley Pink'* and *Haberlea*. Both of them flowered well last year. One last "bun"-- *Acantholimon hohenackeri* is now 14 x 10 x 5" high and should provide a good display this year.

In an area from the rock garden I noted *Erica carnea 'Winter Beauty'* was doing very well, as was *E. carnea 'Ruby Glow.'* The other *E. carnea* that we have, which may be older plants, are not as happy, but were producing some flowers. These included: *E. carnea 'Foxholm Fairy,' 'Loughrigg,' 'Atrorubra,' 'Cecilia Beale,' and 'Vivellii.'*

I do hope that any of you who are visiting Alberta will come and see us at the Devonian Botanic Garden. We are open 10:00 a.m. to 6 p.m., Monday through Friday, and 1 p.m. to 6 p.m., Saturdays and Sundays, May through September, inclusive. To find us; we are nine miles south on Highway 60, six miles west on Highway 16 of Edmonton.



Illustration: Mary Kenady

VACCINIUM MACROCARPON

Lou Messmer, Grays Harbor College

The large or American cranberry, *Vaccinium macrocarpon*, Aiton, is the only species that is extensively grown commercially in North America. It is native to the eastern United States and Canada. The name, cranberry, comes from "craneberry" and dates back at least to colonial times. The curve of the slender pedicel and the bud before the blossom opens resembles the crane's neck.

Commercial production began in the early 1800s. Today several cultivars are grown in the United States and Canada. Coastal cultivated bogs in Grays Harbor and Pacific counties produce a sizeable fraction of the nation's cranberries. Washington ranks among the top five states in production. A well-prepared and tended bog can continue to yield for a century or more. Some of the Grayland bogs are over 75 years old. Locally the pomace from the production of juice is used as a mulch for acid-loving plants in ornamental gardens.

The wild cranberry of local wild bogs, *Vaccinium oxycoccus*, L., is edible but not cultivated for commercial purposes. It is also known as the European cranberry and is found all around the Northern Hemisphere in suitable locations.

Vaccinium macrocarpon can be utilized as an ornamental ground cover beneath rhododendrons and other broad-leaved evergreens. The small pink flowers are distinctive with recurved corolla lobes looking much like a miniature shooting star (*Dodecatheon*). The plant is attractive any season of the year whether in flower, fruit or in late fall when the foliage turns dark red. Judicial pruning of the long creeping stems will force them to branch and form dense colonies. Bog conditions are not necessary for successful cultivation though plants should not be allowed to dry out. The cultivar *V.m. 'Hamilton'* is a delightful new introduction, much branched with foliage densely packed along the stems, forming a compact little shrublet. It flowers heavily in Pacific Northwest gardens but so far fails to produce fruit.

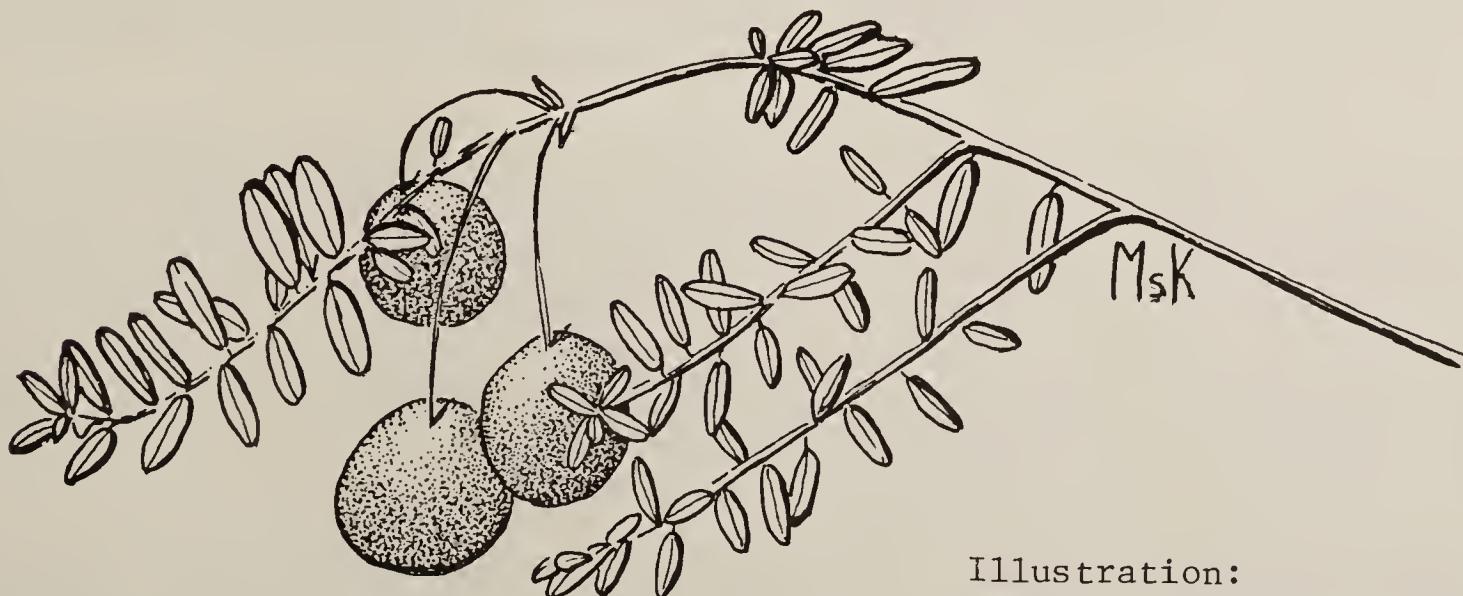


Illustration:

Vaccinium macrocarpon
Mareen S. Kruckeberg

THE SWISS NATIONAL PARK

by Marjorie Parish

The month might have been January; in fact, it was June. There in the field beside the Hotel Parc Naziunal was a large and very solid snowman. We chuckled appreciatively for we had just battled our way on foot at 6000 feet through a sharp summer snowstorm on our first visit to the Swiss National Park.

A Cloak of Silence. It seemed fitting that our first approach should be on foot, for though the drive over the Il Fuorn Pass is breathtakingly wild and beautiful, it is only by wandering along the quiet tracks that the unique atmosphere of this wonderful nature reserve can be fully sensed and understood. Then the silence can be felt - almost heard - and yet one gradually realizes that it is but a cloak for the abundant life around. The life of trees left alone by man, of birds busy about their affairs amongst cone-filled branches; the life of animals, noble like deer and ibex or nimble as marmots and squirrels, and of plants in a never-ending variety of form and colour.

Since the day of the snowstorm we have returned three times to the Park with the Hotel Parc Naziunal as our base. Here binoculars are brought to the breakfast table, where the wide windows overlook deer and bird country. Evenings in the lounge with its beautifully panelled walls of Cembra pine are warm and friendly as guests of many nationalities share "Alpenflora" over an exchange of the day's experiences. Language is no barrier and we eagerly learn from one another.

Carpets of Rainbow Colour. Not far away the alpine flowers we had come to seek and photograph form extensive carpets of rainbow colour. Deep blue gentians, lilac and rose primulas, soft sulphur-yellow anemones and royal purple marsh orchids combine with countless others of equal and entralling beauty in an ever changing kaleidoscope. Especially do we recall long steep slopes patterned white with the dancing frilled flowers of alpine crowfoot (*Ranunculus alpestris*) - thousands of them - while below by a rocky turbulent stream the same plants peeped at us from the tiniest of crevices with almost impish delight at their own tenacity! Edelweiss (*Leontopodium alpinum*) is suspected of tempting the plant-seeker to risk his neck on craggy cliffs for its pale felted charm, but we found it a dominant plant in one high rocky field, fortunately remote from habitation.

The forests which clothe the lower slopes with larch and pine are the cool quiet homes of plants of delicate shades and often creeping habits. The alpine heath, *Erica carnea*, provides a deep rich carpet of carmine flowers offset by thin dark green leaves. *Daphne striata*, pale pink and sweetly scented, contrasts with the bright orange and creamy yellow of box-leaved milkwort (*Polygala chamaebuxus*), whose flowers deepen in colour after pollination. More rarely seen are pale yellow spikes of the peculiar coral-root orchid (*Coralloriza trifida*), which feeds on decaying plant material.

St. Olaf's Candlestick. Our favourite flower of the woods is St. Olaf's Candlestick (*Moneses uniflora*), an arctic-alpine which perhaps was known to Norway's patron saint long ago. In the Park these demure little plants are

scattered in small groups amongst moss and pine needles. Each droops one large creamy-white flower, lighting up the dark green shade as might a tiny delicate candle.

We remember with awe the wild rugged valleys and gorges, like Stabel Chod and the Val dal Botsch whose cascading streams laughed and chuckled their way down to the main river below, eventually to spill themselves into the Black Sea via the Inn and the Danube! Sometimes a plank or log provided a risky crossing, at others the fording was exciting and difficult, especially after rain or snow, but always the wild flowers were our reward. Boulders and stones were covered with brilliant mosaics of rock-roses and globularias, gold and lavender blue together, or the intense purple and flame of alpine toadflax, (*Linaria alpina*). Crevices were filled with yellow *Draba aizoides*, purple violas, tiny white cresses and slender-stalked saxifrages. Wet ground supported the insectivorous butterworts which supplement their dietary needs by trapping small flies on stickily-shining leaves. Such attractive plants to have such barbarous (almost human) habits!

Trout Hatchery. The neighbourhood of the hotel provided good hunting-ground, especially near the river. Our first-ever record of *Dryas octopetala* was made here, its white wild-rose flowers fully open to the sparkling sun which followed our snowstorm. Not far away grew a dainty and unusual species of fragrant orchid (*Gymnadenia odoratissima*), pale pink and delicate in form. It was here, whilst photographing two frogs (which seemed to enjoy the process as much as we did) that we were joined by the hotel proprietor who showed us the trout hatchery belonging to the hotel, and then left us, carrying with him his basket of gleaming fish. We all enjoyed a delicious supper that night!

With joy we remember Munt la Schera, the mountain whose wooded slopes rise steeply to a height of 8491 feet opposite the hotel. Twice we reached its summit-cairn to experience that exhilarating sense of achievement and the feeling of being one with the universe which the climbing of a mountain brings. The snow-capped ranges of Italy and of the mighty Bernina Group of the Upper Engadine glistened in brilliant sunshine, and the wind swept away all cobwebs from our minds. Around the cairn were ten species of plants in flower; bright cushions of colour and reminders of the tenacity and strength of these small but important members of the plant kingdom. *Dryas* was dominant over the rubble and frequent snow-patches were decorated with purple fringed bells of *Soldanella alpina*, those glories of the mountain spring.

No Shouting; no Picnic Fires! We had already negotiated many pockets and areas of snow beneath which the path disappeared. However, these Park tracks are cairned with painted stones, each with three horizontal stripes on both sides, a broad red one between two narrower white ones. Thus, in all but the very worst conditions, the way is well marked and clear. The Park's regulations may seem strict to some British visitors (no shouting; no picnic fires; no cine-photography; amongst more obvious rules) but this reserve is not like our National Parks in any way. It is land where, "undisturbed by any human hand, Nature may work out her own destiny" (quote from Illustrated Guide to Swiss National Park). Accommodations for visitors is limited to the one hotel at 6000 feet on the Il Fuorn Pass and a few simple huts (blockhouses) . . . but those who are prepared to respect its laws, and even more its plants and animals, are welcomed - and, as we can testify, are rejuvenated by staying a while.

Marmots and Golden Eagles. You have only to sit quietly on Alp Grimmels or its like and marmots appear preening, playing, feeding (they are herbivorous), and whistling their earsplitting call to each other if they suspect danger. Be still, and you can watch them for a whole afternoon. Mountain goats (Chamois or Gemse) are more shy and remain at a greater distance, but to see them poised on the skyline is a great thrill. Deer are most often seen in the early morning, but we occasionally spotted them during the day. Golden eagles nest in the high cliffs above the hotel; and crested tits flutter in small parties from tree to tree, breaking the silence so gently that it is all the more profound for their soft trilling. The cheery nutcrackers feed on the seeds of the age-old Cembra pines and in doing so enlarge the distribution of these trees, the most magnificent of the Park. Their five-clustered needle leaves and grey-purple cones distinguish them from all other European pines.

Unsurpassed Alpine Scenery. The Il Fuorn Pass, the only road in the Park, climbs its dramatic and exciting way from Zernez in Switzerland to Italy around hair-pin bends and over precipitous gorges, and all the way through scenery unsurpassed in the Alpine range. We would advise all prospective travellers to visit the Park Headquarters and the Exhibition in Zernez. Much newer than the Park itself, it embodies the excellent idea of showing people not only what can be found in a nature reserve of whatever type or size, but how and why such places have come into being and why they are so necessary in our congested speed-crazy world. Conservation groups in Britain use this method, too, and it is of inestimable value in attracting great interest and arousing understanding of the problems involved.

Specialist visitors to the Park come from all over the world: naturalists, zoologists, botanists, ornithologists, geologists, and, in particular, those charged with the administration and creation of new parks in other lands that they may learn from this long established pioneer effort in conservation.

We all owe a tremendous debt to the foresight and faith of the pioneers of the Swiss National Park and others like them. Such reserves are their ever-living memorial and we have the privilege of enjoying the results of their protective measures. But we have also the responsibility of handing on these reserves unspoilt to future generations. That responsibility we must never forget as we walk these quiet tracks.

Footnote: Written for the Swiss National Tourist Office



P E S T P R O F I L E S

by Sharon J. Collman
Washington State University Cooperative Extension

DOGWOOD ANTHRACNOSE - - Gloeosporium sp.

HOST PLANTS:

Native flowering dogwoods (*Cornus nuttallii*) and Eastern dogwood (*Cornus florida*). All other dogwoods "seem" to be immune, although further study is needed to substantiate these observations.

DAMAGE:

Large, brown, irregularly-shaped blotches or spots on the leaves. Blotches begin at leaf margins and progress along veins giving a wedge appearance. This fungus can also move into or directly attack the twigs as well as leaves and can cause twig death. Dead leaves remain on the tree and are an indicator of this disease.

LIFE CYCLE:

This fungus disease generally appears from late May through early July, although it can become active during moist weather anytime during the growing season.

METHODS OF CONTROL:

- . Prune out and burn infected twigs where practical.
- . Rake and burn or destroy leaves of infected trees where possible.
- . The fungicide Benlate (or Benomyl) is registered for control of anthracnose disease on shade trees. Limited studies in Washington have shown it will give some degree of control. Sprays should begin at bud break and continue at 10-14 day intervals until dry weather. If minimal sprays are desired, then protection at bud break is the most critical spray. A fall spray before the rains begin will protect twigs from infection.

COMMENTS:

This disease is fairly new to our area, arriving within the last five years. Dogwoods have been fairly heavily infected for the past two years. Survival of trees will depend on the basic good health of the tree. The more vigorous the tree, the better chance it has of withstanding repeated defoliations. Trees with frost crack, slow root damage, crown/root rot, or sunburn may be weakened further by this disease.

Like the insects, diseases too have their cycles. Prolonged dry weather will tend to slow down or stop the spread of this disease.

Further information is available free from the Cooperative Extension office in each county. Ask for EM 4421 "Dogwood Anthracnose." In addition, King County residents may call Dial Extension and ask for tape number 292, "Dogwood Anthracnose."

PLANT SALE REPORT

Mary Fleming and I, as Co-Chairmen of the Fall Plant Sale, felt privileged to meet and work with so many fine people. Without exception, each Department Chairman provided excellent quality plant material, found her own volunteer helpers, and met all deadlines and schedules. A plant sale has to succeed with that kind of team!

There were many other "plusses." The publicity was superb. Betsy Grimes deserves praise for covering publications, big and small, as well as radio and TV spots. The plant list mailing also proved to be good publicity. Margaret Mulligan and Dorothy Brauss spent long hours compiling it. Many people came to the sale with list in hand.

We are enthusiastic about the Museum of History and Industry parking lot as a site. It is a beautiful site, and the fine museum staff, from Dr. Warren on down, went out of their way to assist us. The Park Department was most helpful, too, providing us with barricades, hoses and trash containers.

Much fine material was propagated and donated to the sale. This material is pure profit and N.O.H.S. members should be encouraged throughout the year to increase propagating.

The raffle added a festive air and earned over \$200.00. It also added new names to our mailing list.

The demonstrations were of interest to many. Everyone who comes to a plant sale is not an expert. Who knows how many new sparks of interest in horticulture may come through these informal demonstrations - perhaps a few new members, and most certainly better gardeners. That adds up to good public relations for N.O.H.S.

Our "roving consultants" were busy sharing their knowledge with the customers and we considered them a great addition to the sale.

As of this writing, the gross profit appears to be in the neighborhood of \$12,000. Our major expenses were the tent and security for two nights. Neither of these costs can be avoided.

As always, the most difficult problem to deal with is finding free trucks and strong bodies to assist in setting up and taking down. We have not found any easy solution to this.

For each job that needed doing, there was always a cheerful and capable volunteer offering help. We thank all of you with warmth and sincerity. You are a wonderful group of people.

Mary Fleming & Pat Venables



N.O.H.S. NOTES

WINTER 1980

Supplement to Horticulture Northwest

President's Letter

Members and Friends:

The Northwest Ornamental Horticultural Society has had a rewarding and successful year thanks to the efforts and participation of so many of you.

IN LEAVING 1980, I would like to review the highlights of the year. The LECTURE SERIES made it possible for us to meet and hear many of the people most responsible for public planting and design in the Seattle Area.

Three PLANT SALES were held, all in locations new to us and all well received; the Spring Sale, north of the city at Alderwood Mall; the Summer Fern Sale, on the Eastside at Crossroads; and our great Fall Sale, centrally located at the Museum of History and Industry.

An early spring FIELD TRIP to Vancouver, and late spring and early fall GARDEN TOURS gave us the privilege of visiting and studying many gardens.

The Journal, HORTICULTURE NORTHWEST, includes articles of interest, written just for N.O.H.S., and brings you news of the PROPAGATING WORKSHOPS, STUDY GROUPS, the SEED EXCHANGE, etc.

SCHOLARSHIPS, GRANTS AND MEMORIALS---The Memorial Fund has been expanded to include Scholarships, Grants, Bouquets to the Living and Special Bequests. In the past this Fund was limited to the purchase of Horticultural books.

Grants were given, this year, to Marvin Black, City Arborist, to study in England; to Ken Gambriel, Curator of the Rhododendron Species Gardens, for his trip to England; and to Brien Meilleur, who is a candidate for a Ph.D. at the University of Washington.

N.O.H.S. purchased, for the Arboretum, the New York Botanic Garden's extensive ten volume encyclopedia of plants in the U.S.A., the ILLUSTRATED ENCYCLOPEDIA OF HORTICULTURE.

The Board has voted that the Northwest Ornamental Horticultural Society would serve as Horticultural Consultants for a proposed Heritage Garden at the Museum of History and Industry. We gave two large plants, Draceana marginata, to the Museum for their front entry hall. We provided the flowers for their Annual Meeting and Banquet.

N.O.H.S. is most grateful to the Stanley Smith Horticultural Trust for its recent contribution "to assist in Educational programs in the stimulation of interest of gardeners in the Pacific Northwest." This will help build our EDUCATION FUND, with its goal of \$100,000, and help us establish a STUDY of ERICACEAE.

1981--The Lecture Series theme is "LET THE EXPERTS SHOW YOU HOW." Our Program Committee has diligently sought out fine experts for this series. We are looking forward to a year which should be interesting, educational and fun for all gardeners, and their friends. Mark your calendar.

JANUARY 29	Thursday	"ADD EDIBLES TO YOUR ORNAMENTALS"
FEBRUARY 26	"	"HOW NATURAL SOIL AND WATER CONDITIONS AFFECT YOUR GARDEN"
MARCH 26	"	"CONTROL YOUR GARDEN BY PRUNING"
APRIL 23		"WHAT PLANTS DO FOR PEOPLE"
OCTOBER 22		"PLANT ARITHMETIC - MULTIPLYING AND DIVIDING"

We are proud to announce that this spring N.O.H.S. is sponsoring two of the 1981 Lectures in Tacoma, in cooperation with the Tacoma Garden Club. A Weyerhaeuser grant to N.O.H.S. in support of our Lecture Series has helped to make this possible.

Jo Hotson, President

CONGRATULATIONS, AWARD WINNERS!

Mrs. Hugh Baird - Garden Club of American Zone XII Horticulture Award

Mr. Willis Collins -

1. Second Service Award from the Pacific Northwest Dahlia Conference.
2. Service Award for the Judges' Programs from the Inland Empire Dahlia Society.
3. Medal of Dedication of Service to the Dahlia from the Seattle Dahlia Society.

Mr. C. Edgar Lile - Bronze Medal from the Seattle Garden Club.

Mrs. Pendleton Miller - Certificate of Appreciation from the American Horticulture Society.



Membership Application
NORTHWEST ORNAMENTAL HORTICULTURAL SOCIETY

Policy:

To give financial support to the University of Washington Arboreta program and to other horticultural education endeavors.

Membership activities encompass:
Lecture Series, Study Groups, Annual Fern and Plant Sales, Tours of gardens of horticultural interest, Horticultural Journal.

(Please fill in form as you wish information to appear in yearbook.)

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Whichever month is closest to date of Membership Application.)

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TYPES OF MEMBERSHIP: (Please check one)

<input type="checkbox"/>	Life	\$500.00
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<input type="checkbox"/>	Contributing	\$ 25.00 to \$ 50.00
<input type="checkbox"/>	Active (Individual)	\$ 10.00
<input type="checkbox"/>	Group or Family	\$ 15.00
<input type="checkbox"/>	Nursery (Member Listing)	\$ 15.00

COMING GARDEN EVENTS
Winter 1981

- January 11, Sunday
1:00 p.m. - 4:00 p.m. Fern Lecture and Demonstration by NOHS member Judith Jones presented by The Friends of the Conservatory at the Volunteer Park Conservatory. Public invited. No charge.
- January 15, Thursday
10:00 a.m. - Coffee
10:30 a.m. - Program "The Wildflowers of the Columbia River Gorge," Mrs. Bruce Russell of Portland, Oregon. Presented by the Seattle Garden Club at the Museum of History and Industry. Public invited. No charge.
- January 28, Wednesday
1:30 p.m.
Tacoma NOHS lecture, "Add Edibles to Your Ornamentals" sponsored by the Tacoma Garden Club at the Washington State Historical Society, 315 North Stadium Way, Tacoma. Public invited. Cost \$2.50 per person, \$1.00 I.D. students.
- January 29, Thursday
10:30 a.m. "Add Edibles to Your Ornamentals," NOHS Lecture Series. Angelo Pellegrini and Robert Tichnor will talk on combining food for the body with food for the soul and Katherine Carey will review plant catalogues and major sources for seeds, bulbs, and plants. Museum of History and Industry. Public invited. \$2.50 charge, \$1.00 I.D. students.
- February 8, Sunday
1:00 p.m. - 4:00 p.m. Cascade Cactus and Succulent Study Group presented by The Friends of the Conservatory at the Conservatory, Volunteer Park. Public invited. No charge.
- February 17, Tuesday
7:30 p.m. "How to Start and Grow Tuberous Begonias," presented by the Seattle Begonia Society. Bethany Green Lake Lutheran Church, 7400 Woodlawn Ave. N.E. Public invited. No charge.
- February 18, Wednesday
7:30 p.m.
Tacoma NOHS program "Control Your Garden by Pruning," sponsored by the Tacoma Garden Club at the Washington State Historical Society, 315 North Stadium Way, Tacoma. Public invited. \$2.50 charge, \$1.00 I.D. students.
- February 26, Thursday
10:30 a.m. "How Natural Soil and Water Conditions Affect Your Garden." NOHS Lecture Series, Museum of History and Industry. Public invited. \$2.50 charge, \$1.00 I.D. students.
- March 8, Sunday
1:00 p.m. - 4:00 p.m. Washington State Primrose Society display and demonstration presented by The Friends of the Conservatory at the Conservatory, Volunteer Park. Public invited. No charge.
- March 16, Monday
11:00 a.m. - 3:00 p.m. Gala III. Entertainment With a Flair - Flower designing and arranging with Pansy Dalesal. Presented by the Washington State Federation of Garden Clubs at the John Danz Theatre, Bellevue. Refreshments served. Public invited. \$10.00 charge.
- March 17, Tuesday
7:30 p.m. Fuchsia culture and a talk on roses. Seattle Begonia Society monthly meeting at Bethany Green Lake Lutheran Church, 7400 Woodlawn Avenue Northeast. Public invited. No charge.
- March 26, Thursday
7:30 p.m. NOHS evening lecture and demonstration by Chico Narro on, "Controlling Your Garden by Pruning." Also, the Brooklyn Botanic Garden film on pruning. Museum of History and Industry. Public invited. \$2.50 charge, \$1.00 I.D. students.
- March 28 and 29
Saturday & Sunday Horticulture Exhibit presented by the Arboretum Foundation at the Northgate Mall. Public invited. No charge.

WELCOME NEW MEMBERS

ALLISON, Margaret A. 3801 E. Prospect, Seattle 98112	329-3377	GUENDULAIN, Mr. Joseph D. 115 - 100th N.E., Bellevue 98004	454-6570
ANDERSON, Mrs. Bill 6837 - 29th Ave. N.E., Seattle 98115	524-4239	JOHNSON, Mr. & Mrs. Lewis H. 2033 Evergreen Pt. Rd., Medina 98039	(Sonia) 454-1474
ANDERSON, Mrs. Raymond 7639 S.E. 29th, Mercer Island 98040	232-2584	KENNELL, Ms. Holly 8919 Lk. Steilacoom Pt., Tacoma 98498	588-6963
BALLARD, Mrs. Patricia 2821 - 69th S.E., Mercer Island 98040	(Pat) 232-0056	MILAM, Mr. & Mrs. Ted 12214 - 1st N.E., Seattle 98125	364-6932
BROODIE, Mrs. Nancy 8209 - 181st Pl. S.W., Edmonds 98020	774-7378	MILLER, Ms. Paige R. 2717 - 3rd Ave. N., Seattle 98109	284-8362
CLARK, Ms. Margaret 9737 Sandpoint Way N.E., Seattle 98115	525-0886	MOODIE, Mrs. Joseph 3005 - 84th S.E., Mercer Island 98040	(Helen) 232-0229
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DUVALL, Mr. Robert H. 1752 - 26th Ave. E., Seattle 98112	322-7586	PASCOE, Mr. & Mrs. Scott M. Route 1, Box 461, Lake Bay 98349	884-3554
ENGLISH, Ms. Mildred 13236 N.E. 40th, Bellevue 98005	885-2018	PHILLIPS, Ms. Maureen A. 5760 N.E. 62nd St., Seattle 98115	525-8682
FARMAN, Mrs. Jeffrey 1204 Eldorado Ave., Tacoma 98466	565-4043	REEVES, Mrs. Willow 11217 - 82nd Pl. N.E., Kirkland 98033	821-0295
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GERRY, Mrs. Marian H. 6819 - 17th Ave. N.E., Seattle 98115	524-0867	WING, Mrs. Linda S. P.O. Box 171, Bellevue 98009	828-3642
GREY, Mrs. Dorothy C. 5640 Davison Head Dr., Friday Harbor 98250	378-2572		

KETCHIKAN MUSKEGS

Sallie D. Allen, Seattle, Washington

It is hard to realize that the muskegs were at one time lovely spruce or hemlock forests, with the typical forest flora and mosses. Somewhere in time sphagnum mosses began to grow, eventually giving way to another species, lighter in color, more of a yellow green. It began to grow in small circles on the forest floor. The reason for this invasion is not known, but because of its invasive nature the circles of moss grew larger, and because of its highly absorbant quality, it became very wet and spongy. It is said that the Alaska Indians utilized this material by drying it, then packing their papooses in the moss, instead of using diapers.

As the sphagnum areas grew larger the roots of the great trees receded, and when no longer able to support their growth they died, standing as ghost forests until they fell and were covered over by mosses. The forest sphagnum mosses gave way to those which tolerate sunshine. On steep slopes the forest remains as there is adequate drainage, and between the forest and the muskeg stand the silver-grey ghost forests. The only tree now capable of growing fast enough to stay above the mosses is *Pinus contorta*. In some of the drier outcrops may be found very small, probably quite old mountain hemlocks (*Tsuga mertensiana*). They are dwarf because of lack of soil, but able to exist because the moss is very shallow and the water is able to run off. To collect one you only have to pull it and it comes away with the soil adhering to the roots.

The theory of muskeg pools or pit ponds as they are called is of great interest. It is believed that the last remaining forest plant to grow on the muskeg is the skunk cabbage (*Lysichitum americanum*), which grows to enormous size. The shading of the leaves kills off the mosses and surrounding vegetation, causing pits to form. The contractile roots pull the crowns down, deepening the pits and they fill with water. After some years of this process the skunk cabbage finds itself in the middle of a pool, gets sickly and dies. These pools are small and clear and occur all over the muskegs. One wonders if the sphagnum would once again take over if the water evaporated during prolonged dry weather. Perhaps the answer to this lies in the 180 inches of annual rainfall; there would never be time enough for the sphagnum to complete the task.

From my first trip to Ketchikan many years ago the muskegs have held a continuous fascination for me. In each one you can see the various stages of evolution in progress. Toward the edges where the trees have more recently fallen and begun their process of decomposition, you find bunchberry dogwood (*Cornus canadensis*) growing in such dense colonies that when in flower or fruit you can hardly see the foliage. Here too are thickets of *Menziesia ferruginea* with much larger and more colorful flowers and bluer leaves than those growing in Washington, mingled with assorted large deciduous huckleberries (*Vaccinium* sp.). Close to these thickets of vegetation may be found enormous plants of skunk cabbage, with pools beginning to form. Within twenty yards of this will stand the actual forest, where all but the *Lysichitum* abound and grow naturally in a very shallow soil of woodland duff.

The reader, thinking in terms of our own peat bogs, may wonder about the danger of roaming the muskeg. The entire Island of Revillaggedo, where Ketchikan is situated, is rock. The muskegs have formed in very shallow basins, where the peat deposits may be only a foot thick. You can work your hands down through the soft peat and feel the rock bottom of the basin. This was true of any that I have explored along the 13 mile stretch of existing road to the northwest (the road extends only nine miles in the other direction from town). Road building is an extremely expensive proposition, as every foot must be blasted out of solid rock. No roads penetrate the interior of the island, which remains wild and unexplored, only occasionally visited by hunters and fishermen who are flown into one or another of the small mountain lakes. The one danger can come from bears during the huckleberry season.

Collecting plants on the muskeg is an interesting experience. For example, you select a small artistic seedling pine, with dense tufts of short needles ... all the qualities you personally desire. The usual collecting tools are unnecessary. Because of the soft peat (no soil) and the shallow rock bottom of the basin, you can just scoop up your pine and peat moss with your hands, obtaining the entire root system. Along with it you also get the most wonderful sampling of this very specialized plant community, *Andromeda polifolia*, *Kalmia polifolia*, *Vaccinium oxycoccus*, *Ledum groenlandicum*, *Empetrum nigrum* and, if you are as fortunate as I was, a small seedling *Juniperus communis nana*, with glaucous-blue foliage. *Loiseleuria procumbens* abounds in some, but not all, of the muskegs I explored. In planting all these in the garden, no attempt was made to duplicate the bog conditions; the various plants were separated from the peat and planted in our normal well-drained garden soil and watered when needed so that they would not dry out. The *Andromeda* and *Kalmia* shaped up into neat little shrubs when they no longer had soft spongy peat to allow them to ramble considerable distances underground. Two delightful surprises came up the following spring, *Coptis asplenifolia* and *C. trifolia*, neither of which I had noticed in the muskeg. All have proven to be worthwhile additions to the garden and their ease of cultivation adds to their desirability.

SEED EXCHANGE 1981

Remember the NOHS Seed Exchange!!! Deadline is January 15, 1981.

We want collected seed from rare, unusual, native or near-native, wild and domesticated plants. Please go out in your garden now and see if there's something still hanging onto its seeds that someone else might like to grow.

We don't want to make this the biggest seed exchange in the country, just one of the very best, and we need a lot of help.

See the last journal, Fall 1980, for details. Mail seed to:

Mary Kenady
18013 West Snoqualmie Valley Road N.E.
Duvall, Washington 98019

FROM THE ERICACEAE NOTEBOOK

LOISELEURIA PROCUMBENS

Sallie D. Allen, Seattle, Washington

The delightfully charming little shrub, *Loiseleuria procumbens*, a monotypic genus of the Ericaceae Family, is of circumpolar distribution in the Northern Hemisphere, growing in Arctic-alpine regions. In North America it may be found from Alaska to southern British Columbia, and extends eastward across northern Canada, down the East Coast to the mountains of Maine, New Hampshire and New York, forming part of the relic flora to be found there.

It has been of great interest to attempt to obtain plant material from many geographic locations to determine whether the single species in the genus is a stable species or if indeed it is variable from place to place throughout its range. The following observations cover a period of nearly 25 years; most plants were collected in the wild and grown in the open garden where they were given no special attention.

Commonly known as "alpine creeping azalea", *Loiseleuria procumbens* is a small evergreen shrub, extremely variable in the wild in habit and leaf size. The structure of the leaves, budding and flowering manner, however, are consistent identifying characteristics. It is usually described as a small prostrate or depressed shrub with leaves up to one-third inch long and half as wide. The leaf is distinctive, leathery in texture, with recurved edges and a prominent mid rib. The red buds appear at the tips of the branches in clusters of three, four, or more, opening in April into soft pink campanulate flowers. It is not showy compared with the bright splashes of spring-time color, but dainty and appealing in every way.

Although in recent years we have been able to offer *Loiseleuria procumbens* occasionally in the "Collector's Corner" of the NOHS annual fall plant sale, it has not been readily available in the nursery trade in this country. Those few people who were growing it when I began my research were working with material collected in the wild, which may account for its reputation of being shy to flower in cultivation, as sometimes it took years for the wildlings to bloom. In collecting plants from the wild, one learns early that there is more likelihood of success if small but strong seedlings can be found and dug with a goodly amount of native soil. Even they are slow to establish and very slow growing. Attempting to dig mature or parts of mature plants is not only destructive but a frustrating waste of time as they will not survive the shock of transplanting.

Many of the several dozen plants growing in my garden I have collected during trips to visit my sister in Ketchikan, Alaska, and years later to Juneau. The remainder, collected for me, are from Fairbanks, Alaska, British Columbia, Japan, Norway and most recently cuttings have just arrived from Switzerland.

From the first Ketchikan visit, the muskegs with their unique plant communities fascinated me. I never missed an opportunity to explore various

muskeg areas where dwarfed, gnarled *Pinus contorta* is the predominant tree, so twisted and shaped as to delight the heart of a bonsai specialist. My first thrilling discovery of *Loiseleuria procumbens* was in an area where the living sphagnum formed a thin top layer beneath which was pure dark peat familiar to gardeners everywhere. The shrub grew much like (and associated with) *Kalmia polifolia* and *Andromeda polifolia*, with the main portion of the plant scooting about beneath the surface, only the tips of the branches showing above. It was impossible to find seedlings so the only hope was to collect a small layered branch with a sufficient root system to sustain it in the garden. It did establish nicely in our normal acid gritty soil without the addition of peat. Its habit is decumbent and it blooms well each year, now a handsome shrub 25 inches across.

On another muskeg on that same trip I discovered a curious variant with a yellow tipped leaf. This characteristic persisted after many years. It tended to be more upright in habit, to about six inches in height and 24 inches across. Several propagations were offered in the NOHS plant sale a few years ago and it is my hope that they are still among the living as my plant succumbed during a prolonged drought. They cannot be allowed to dry out.

A third variant found that year was in a rocky outcrop in what became my favorite muskeg at the foot of Deer Mt. at about 200 feet elevation. The sphagnum there I assume to be a different species because that decayed material below the living surface is beige in color and of a texture of finely ground peat. In an irregularity in a rock I found a seedling *Loiseleuria* not more than two inches across, completely prostrate in habit with a marvelous tiny gnarled trunk. It was much branched with leaves and flowers at the tips of the branches. It was growing in almost no soil, and could be easily removed with its complete little root system uninjured. It has retained the same gnarled prostrate habit, but is now 20 inches across.

In 1963, three plants were collected for me from the Mendenhall Glacier flats near Juneau, Alaska. They were completely prostrate in habit, much branched, the tiny leaves which densely covered the one and one-half inch mats were approximately half the size of those of the Ketchikan plants. The foliage on two of them was typical medium green with the newer growth red in color. The third had much lighter green foliage with the new growth a buff color instead of the characteristic red. The soil collected with these plants was a fine soft glacial flour without evidence of peat or humus of any kind.

When the lighter foliaged *Loiseleuria procumbens* flowered five years after it had been transplanted from its native habitat, my hopeful suspicions were confirmed. It was indeed an albino form, soft cream in bud, pure white in flower, truly a rare gem of the plant kingdom. Because it is extremely slow growing, eight inches across after all of these years, only a few cuttings could be taken in any one season. So far I have not succeeded in rooting a single one.

Several years ago we visited my daughter in Juneau and had numerous opportunities to explore the Mendenhall Glacier flats just two miles distant from her home. After considerable searching we found the fascinating area with its singular plant community of high alpine plants growing here at sea

level, or nearly so. Among the Ericaceae we found *Cladothamnus pyrolaeflorus*, *Phyllodoce glanduliflora*, *Cassiope mertensiana*, *C. stelleriana*, *Loiseleuria procumbens* and several deciduous *Vaccinium* species, all compact and low growing as one might expect to find high in the mountains. Dwarfed small Sitka spruce, *Picea sitchensis* and congested specimens of *Silene acaulis* were also inhabitants of the immediate area. The soil was, as before mentioned, soft glacial flour with golden speckles in it. Such pioneer plants as willow and alder were present, though their invasion somewhat slowed by the soil conditions, I presume. Toward the mountains where there was humus in which they grew, they were enormous and had successfully shaded out the understory of shrubs. Separated but not far away were several dwarf *Salix* species, *S. reticulata*, the most exciting find, *Lycopodium alpinum*, a magnificent species that has adapted well to the garden, and the interesting *Tofieldia coccinea*.

Among the *Loiseleuria procumbens* populations were white and very soft pink forms as well as the type. The plants ranged from those the size of a quarter to enormous extensive mats, all with a dwarfed, completely prostrate habit.

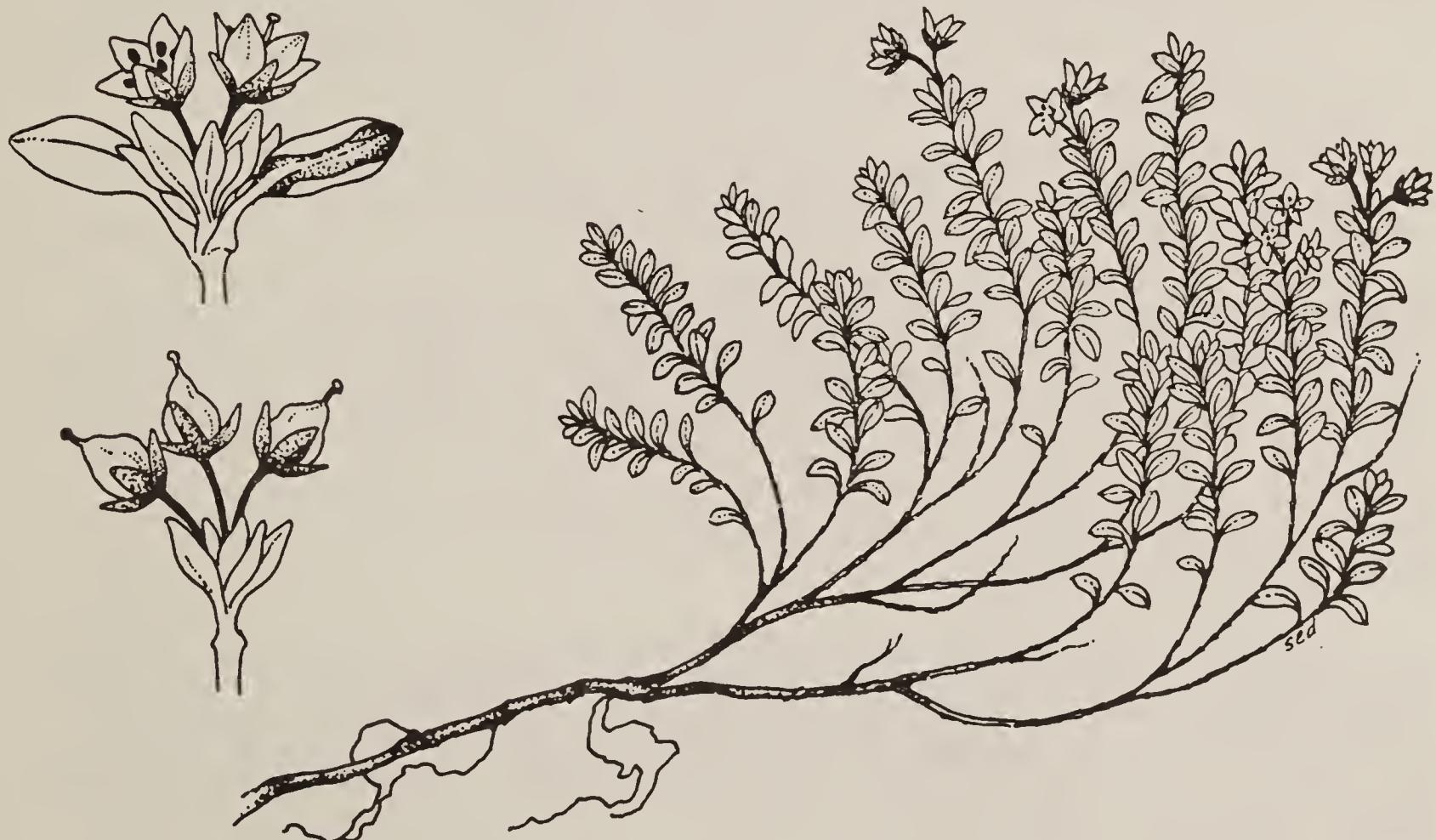


Illustration:

Loiseleuria Procumbens
Sally E. Dickman

A plant collected for me in the Japanese alps many years ago has never flowered. It is decumbent, six inches high in the center and larger in all of its parts, the leaves twice as big as the Ketchikan plants, and not nearly as closely packed. The one from Fairbanks, Alaska is a procumbent little shrub, less woody than other plants. Those from Norway succumbed after only a year or two, never looking quite happy. One from British Columbia is procumbent, much branched and dense foliaged, forming a compact mound. It and another Norwegian plant need to be transplanted from a garden area which has become far too shady, into one that is more open and sunny. A few years ago I was given a stiffly upright free flowering form where every branch tip holds a cluster of pink blossoms each spring.

About eight years ago we had the opportunity of going to Ketchikan very briefly in June, a time that we had never happened to go previously. I had learned that a road had been built far into the Deer Mt. muskeg, penetrating much deeper than I had ever been before. The entire area was a rosy pink haze with *Kalmia polifolia* at its peak of bloom. It was impossible to walk without stepping on *Loiseleuria procumbens*, *Andromeda polifolia*, *Vaccinium vitis idaeamminus*, *V. oxycoccus* and a yet unidentified *Vaccinium*, small, prostrate, blue leaved with shocking pink bells. An interesting *Lycopodium* species was prevalent, small *Pinus contorta* with extremely short needles and of intriguing habits, and near the pit ponds were colonies of *Pinguicula vulgaris*. Our time there was so limited that I collected quickly a good deal of plant material with a clear conscience in the amount taken. You see, the City of Ketchikan has built the road into this lovely area as access to a garbage dump! Where I collected in quantity would soon be covered with debris.

Even after all these years I'm reluctant to draw very many conclusions. *Loiseleuria procumbens* with its circumpolar distribution seems to be an extremely variable species in habit and leaf size. So far each has retained the original characteristics it possessed when collected, including the tendency to bloom or not to bloom. I'm inclined to think that the removal of spent flowers before they have an opportunity to develop seed increases the amount of bloom the following year. In this suburban Seattle garden, they are not difficult plants to grow, which cannot be attributed to any special gardening talent. Newly received specimens are planted right out into the garden immediately upon arrival and watered frequently. Since they are favorites of mine they are greatly admired ... yes, talked to ... on my daily tour of the garden.

It would be interesting to try material from other stations throughout their range, including their most northerly and southerly limits. In taking plants from numerous localities, different soil and growing conditions, and planting them all in the same garden (in soil unlike any they originally grew in) they did not stabilize, losing those unique characteristics of individual variation. After eight to twenty-five years they have retained the individuality they possessed when selected in the wild. It would lead one to believe that due to differences in environmental factors in their native habitat, genetic variation has occurred and *Loiseleuria procumbens* has adapted individually to this genetic change.



COROKIA COTONEASTER - A NATURAL BONSAI SUBJECT

Brian Halliwell, Royal Botanic Gardens, London, England

Corokia cotoneaster is a member of a New Zealand genus of only three species belonging to the family of Cornaceae. It has a place in a garden if only because of its strange habit of growth. Nature seems to have produced without the interference of man the type of growth that some western practitioners of bonsai misguidedly aim for.

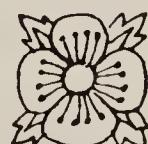
Reaching perhaps eight feet in height, this rounded bush produces a dense interwoven tangle of thin zig-zag upright stems which are white felted when young but become smooth and dark, almost black with age. Alternate spoon-shaped leaves which are about three-quarters of an inch long including the flat petiole are sparsely produced, being a dull dark green above and white felt beneath. In late spring, usually May, five-petalled deliciously fragrant yellow star-shaped flowers are freely produced with up to four in each leaf axil. Following pollination, from each flower a single seeded fleshy fruit up to one-half an inch in length is produced which may be yellow, orange or red. Normally in isolation, this plant produces its fruits poorly and there always seems to be a better fruit set when several bushes are planted together. (It is curious that *Corokia X virgata*, a hybrid between *C. cotoneaster* and *C. buddleoides*, sets its fruits readily.)

Widespread throughout both the main islands of New Zealand, although missing from Stewart Island, it is found from lowlands up to the lower slopes of mountains. It can occur on stable sand dunes, on any poor well-drained soil, and is an early colonizer following bush fires.

It is a useful shrub for coastal gardens where it is well able to withstand salt-laden winds. Although tolerant of full exposure, it dislikes cold winds and is not able to take extreme cold. Its habit of growth makes it well suited, if available in quantity, for making a low but dense hedge which needs little trimming.

Propagation is most easy by seed if this is available. Extract the seed from its surrounding flesh, wash and sow out-of-doors in the fall in a well-drained but moist soil; germination will take place in the following spring.

Here is an unusual and interesting little-known shrub that deserves a place in the garden if only for its curious habit of growth. It is an attractive sight in the spring when in full flower and if it can be induced to set its berries, is handsome as a fruiting subject.



Tidbits by Ladybug



ARBORETUM VOLUNTEERS NEEDED!

A new volunteer program is being set up at the Arboretum through the University of Washington's Center for Urban Horticulture. Volunteers are especially needed for help in the office and for an enlarged docent program.

For those who want to be involved in the operation of the Arboretum, there is no better way than to work in the office occasionally.

For anyone interested in plants, the Docent Program is an excellent opportunity to become more familiar with your Arboretum and the multitude of trees and shrubs that grow there. The Docents will have training sessions this spring in order to prepare them for leading tours through the Arboretum.

If these activities appeal to you, call Jan Pirzio-Biroli, new Naturalist and Volunteer Coordinator, at the Arboretum office (543-8800) any time on weekdays between 8:00 a.m. and 4:30 p.m.



The Conservation and Horticulture Committees
of the Seattle Garden Club
invite you to a program on
"The Wildflowers of the Columbia River Gorge"

Thursday, January 15, 1981, at
The Museum of History and Industry
Coffee: 10:00 a.m.; Program: 10:30 a.m.

Our speaker, Mrs. Bruce Russell of Portland, will show her own botanical slides of species found in the Gorge area, many of which are on the endangered/threatened list.

Mrs. Russell is an active member of the Oregon Native Plant Society, is on the Boards of The Portland Garden Club and the Berry Botanical Garden in Dunthorpe. She lectures for the Oregon Historical Society on the subject of the Oregon Trail, and is one of the leading proponents of The Committee to Save the Columbia Gorge.



Vaccinium macrocarpon. New England sea captains were early aware of the cranberries' worth as a preventative against scurvy. Cranberries are so packed with Vitamin C that they may retain a high degree of nutritive value even after being stored fresh for a year or more.



An opportunity for correspondence and exchange of seed. Mr. Kjeld O. Jensen, Vanas 1211 A, 28040 Skanes Fagerhult, Sweden, wishes to get in touch with someone in western or mid-western U.S. willing to enter into a correspondence and seed exchange. He is interested in hardy American plants, particularly those that are large and spreading. He writes that he is also interested in trilliums and erythroniums which are seldom seen in the existing seed exchanges. This is a fine opportunity. Please contact Mr. Jensen directly.



Give a gift of membership in the NOHS to your gardening friends for Christmas. It will be warmly appreciated the whole year through.



Don't forget the NOHS seed exchange. The deadline for seed contributions is January 15th.



My planting of Helene Schiffner rhododendrons is on the east side of my house with full exposure to the south sun until 3 p.m. in midsummer. A thorough soaking of the bed once a week did not prevent sunburning of some leaves even though the bed is deep and contains much peat moss. However, spraying the leaves each afternoon after a hot, sunny day completely eliminated sunburn last summer. Also, following the advice of Comerford's (nursery in Marion, Oregon) Green Sheet, I began a foliar feeding program using diammonium phosphate. This is a readily water soluble fertilizer containing 21% nitrogen and 53% phosphate. I used one teaspoon per gallon with spreader-sticker every two to four weeks, beginning when the leaf midribs began losing their good level of green color. I have not yet succeeded in keeping the leaves exposed to the sun as dark a green as the shaded ones, but the color is very much improved.

Don Hendricks, Mercer Island, Washington



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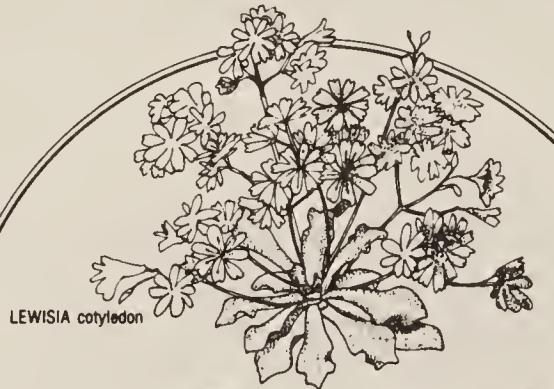
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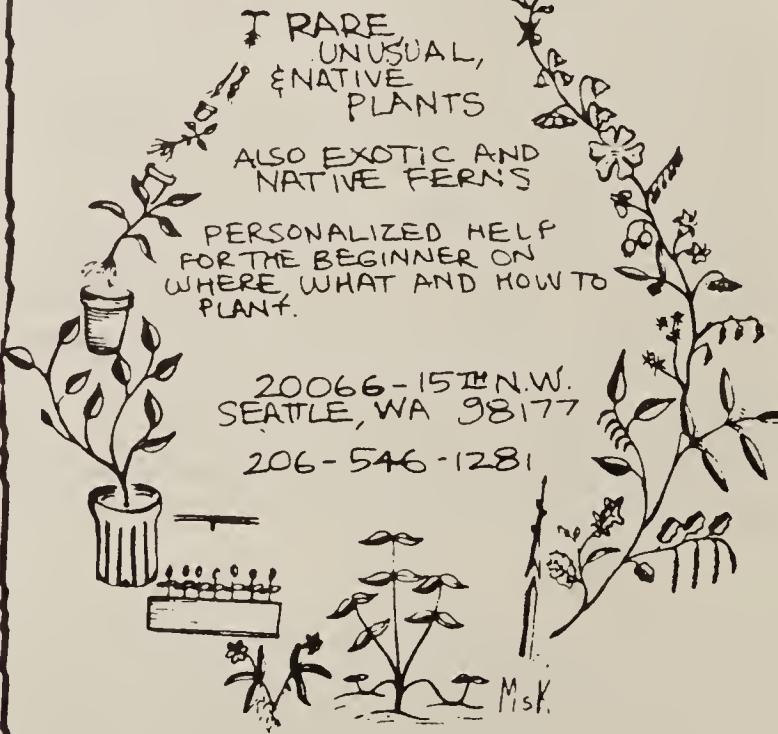
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